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Vol. 4, No. 5

June - 1939

WISCONSIN SHELTERBELTS GROW LONGER

(Condensed from an article by Extension Forester F. B. Trenk, in Wisconsin Conservation Bulletin for April, 1939.)

When the current tree planting season ends, Wisconsin will have completed five years of its shelterbelt project. Over four million trees will have been planted in lines of "sentinel service," to protect soils that are sandy and easily blown by the winds. It is an epic story, this mass interest in tree belts to shelter farm acres, the generous cooperation of the state in furnishing the trees, and the community enterprise in distributing and planting them, to the end that tree belts might permanently stop the shifting and blasting of sandy soils.

Nearly 50 years ago, when land clearing in these counties was in progress, strong warnings went unheeded. It was then that the late Prof. King of the Wisconsin College of Agriculture urged the saving of tree belts to protect the newly cleared fields. Said he: "Where the clearing is done, it ought certainly, for the present at least, to be done in strips north and south, leaving belts as windbreaks to stop the drifting, and to make surer a crop of the all-important clover. Certainly the influence of those trees now standing ought to be observed with great care, and the destruction of them which is now going on ought to be stayed."

How badly those trees were needed during the memorable dust storms of May, 1934, those who lived on level, sandy farms were most willing to testify. A few enterprising farmers, fully conscious of the menace of wind erosion damage, had been setting out young shelterbelts for over 10 years previously, using trees obtained from the Conservation department. Young tree belts, only 12 to 15 feet high during the 1934 dust storms, provided most convincing proof of their effectiveness, and out of those experiences came a united call for Wisconsin's own shelterbelt project.

The Conservation department was equipped to produce the necessary trees, given definite information on how many and what kind of trees would be required. To get this information a survey was started with funds provided by the State Emergency Relief Administration, under the direction of district forester, Clyde Smith. This survey, now completed for parts or all of over 60 townships, determined approximately how many trees would be

needed for the critical areas, who owned the land, and the extent to which the landowners were willing to cooperate in the project by doing the planting and necessary cultivation thereafter.

County agricultural agents and teachers of vocational agriculture make use of their many opportunities every winter in farm meetings to obtain tree orders from farmers to plant new shelterbelts, to lengthen old ones, and to make necessary replacements in those already planted. The standard shelterbelt recommended for wind erosion control consists of three rows, and preferably a different species of tree for each row. Jack pine is recommended for the windward row on most soils, Norway pine is most generally used for the center row, and Scotch pine serves best in the leeward row, though sometimes white pine is used instead of jack pine in the row most directly exposed to the wind. The rows are eight feet apart and the trees are planted six feet apart in the rows.

Trucks are used to transport trees from the nursery to the distribution center. Although the trees are given to the farmers for shelterbelt planting, the packing and trucking is an extra service, for which the farmers pay at the rate of five cents per hundred trees delivered. An effort is made to select distribution centers at farms where a shelterbelt is to be planted, or where one has been planted and replacements or an enlargement is to be made. This makes it possible to show, by means of a planting demonstration under typical field conditions, how a tree should be planted, the correct spacing and distribution of species, and the care which should be given to the shelterbelt after planting. Farmers obtaining trees for shelterbelts sign an agreement with the Conservation Department that the trees will be promptly planted, and that they will be given all reasonable protection against destruction by fire, livestock, or weeds due to lack of cultivation.

Shelterbelts have now come to be recognized as one of the three vital elements in the struggle to prevent wind erosion and consequent soil fertility losses on relatively level sandy areas. The other two are stripcropping, and soiling practices which increase the amount of humus in the soil. A secondary but none-the-less valuable element arising from tree belts is the added winter cover afforded game birds and animals. Oak groves and hedges that are becoming more and more thinned out as the result of disease as well as cutting, have meant for many years a declining amount of winter cover. Shelterbelts promise to reverse this trend.

Rainy seasons and good crops may dull for many the memory of blighting dust and sand storms which proved so destructive in the early 30's, but there are those in the state's areas of lighter soils for whom planted tree belts are barriers against the return of those days of ruined crops and fields blasted by sand. Shelterbelt planting in Wisconsin is more than a project; it has become part of a system of farming.

- E. L. Perry, R.O.

In medieval times, a tenant's firewood was limited to the amount of underbrush he could cut with a hook and the deadwood he could knock from the trees with a shepherd's crook. Hence the expression "by hook or crook."

- California Ranger.

WE'LL HAVE TO ASK TM ABOUT THIS

"This issue of PLAINS FORESTER is printed on paper made from trees cut from our shelterbelts," -- that's not a pipe dream, but while it is not likely to happen, recent developments in Texas show it to be wholly within the realm of possibility.

Here is the Texas experience: The March-April issue of Texas Forest News, issued bi-monthly at College Station, Texas, under the auspices of the Texas Forest Service, consisted of two sheets folding into eight pages, and was printed on paper made in the South from southern trees. What is more, one of the two sheets was from the roll of pine newsprint which had been manufactured as a part of a test run of paper for the Southland Paper Mills, Inc., now erecting a plant near Lufkin, Texas.

One sheet, which has the appearance and feel typical of the other brands of first-class newsprint, was made from 80 percent ground pine wood and 20 percent pine sulphate pulp. The other sheet, which is smoother and whiter and of a quality for magazines, was made from 80 percent ground black gumwood and 20 percent pine sulphate pulp.

The opening of the Southland Paper Mills, Inc., at Lufkin will inaugurate the manufacture of newsprint in the South from southern pines on a commercial basis. Needless to say, the results of this successful attempt will have an inestimable effect in reducing unemployment and raising standards of living in the South.

- Texas.

PICTURES CAN TELL THE STORY, YOU KNOW

The Nebraska Unit has found a double-bitted axe in its education tool kit, and is wielding it lustily. The tool is made up of pictures and brief cutlines which are sent to newspapers, the present series concentrating on the cultivation problem. Local interest is stressed, and each picture shows a shelterbelt in the trade area of the newspaper receiving it. The cutlines call attention to the results obtained from the excellent care the trees in the picture have received and give the location and name of the cooperator.

It is an especially effective mode of education, for pictures can tell much more than words. Not only does it set a goal for all cooperators in the area, but it brings home to other persons the importance of cultivation and other matters pertaining to tree growing. The whole public ought to have some knowledge of the problems of tree growing on the Plains and the reasons for success, which they can gain most readily from pictures.

Of course, the use of pictures is limited, because of mechanical considerations, to those newspapers equipped to make cuts and those others whose position warrants their purchase. Any other state which adopts the plan will do well to remember not to send the same picture to more than one newspaper, and be sure that the picture tells a local story.

- H. J. Swan, R.O.

The Indian population of the area now included in the United States was less than 900,000 when Columbus discovered America, according to an estimate of the Bureau of American Ethnology.

- Wisconsin Conservation Bulletin.

THIS QUESTION OF USEABLES-PER-FOOT AGAIN

At the Fremont nursery last fall, the percentage of undersized stock in blocks of 2-0 hackberry, wild plum and American elm was as great or greater than in the 1-0 blocks. This may be accounted for in part by the fact that the 2-0 stock had been undercut and the useables pulled the previous spring, but there is also the possibility that a certain number of culls are to be expected from each lot of seed regardless of thinning. An experiment in thinning conifer seedlings at the Hugo Sauer nursery at Rhinelander, Wisconsin, described in Technical Notes released this spring by the Lake States Experiment Station, developed information along this line. Results of the experiment show that, although thinning was beneficial to stock by increasing its average weight and stem diameter, a greater number of plantable trees per square foot are grown in unthinned beds, regardless of the standard set as the minimum acceptable stem caliper.

The Lake States report emphasized the advisability of attaining the desired density by reducing the amount of seed rather than resort to thinning. This, of course, has been preached and practiced on our Project for a long time, but even though nurserymen of necessity are optimists, who among us will "stick his neck out" at sowing time and state the number of useable trees he will harvest from a given lot of seed? We are not so fortunate as farmers who sow certified high-bred grain seed and can expect uniform stands of grain, and so long as our seed is obtained under existing conditions, we are not going to produce uniform stock. Often we know little about the quality of the seed we sow, and because of numerable possible losses we can think of, coupled with an ingrown horror of too thin or patchy stands, we increase the amount of seed a little. This does not seem foolish at sowing time, but later in the summer when most of the anticipated losses fail to materialize, we have a job of thinning on our hands in order to comply with the prescribed maximum number of trees per foot.

I believe strongly in density control in sowing, but when we don't hit it right and still can expect as many or more plantable trees per foot or per acre, why do we even worry about thinning unless we feel that we are overstocked? How about it, TM?

- M. K. Meines, Nebraska.

WHY NOT TOP RED CEDAR FOR BETTER SURVIVAL?

A number of large 2-0 monosperma juniper trees at the Boatright, Oklahoma, nursery which were topped in the spring of 1938 survived better than smaller untopped trees of the same age, and I believe that topping of red cedar in the nurseries will give better field survival because better balanced trees will result. I suggest growing red cedar to heights of 14 to 18 inches and then cutting them back to 10 inches. This would cause a stocky stem that would not succumb so readily to sandblasting and hot winds.

Usually a topped tree branches heavily and grows more than one stem, but we get the same objectionable growth if a tree survives after the top has been killed by sandblasting. Many of the trees fail to survive, however, and the possibility that field losses can be reduced if the trees are top pruned in the nurseries should be given consideration.

- E. W. Luke, Oklahoma.

SIGNS - SOME GOOD SUGGESTIONS

While driving through a soil conservation project area, one sees many instructive and worth-while signs calling attention to contour farming, terracing, strip cropping, and the many other practices being put into effect. Game preserve areas likewise have their signs; in fact, here in Texas signs are placed on the boundaries of each game cooperator's land. A trip into our National Forests also discloses signs calling attention to improvement cuttings, recreational areas, needs for fire prevention, forest boundaries, and in addition signs are now being constructed which not only give general information but offer detailed information by means of an ingenious folding compartment.

In my opinion, this Project has the best signs and the fewest signs of any government agency engaged in similar work. It is recognized, of course, that money probably is not available for many of the signs that would be worth while, but nevertheless, the following are several classes of signs for which the writer has done some wishful hoping:

- 1. Cooperator name signs. These signs would show present owner and also operator, if different from owner. They could be attached to our large belt signs, and would emphasize the importance of our cooperators.
- 2. Species markers. On some locations it might be desirable to have species markers where the general public would be likely to inspect the belts.
- 3. At points of special interest, signs could be placed calling attention to unusual growth, experimental plantings, thinnings for products, unusual species, examples of influences with detailed information on these influences in folding compartments, etc.
- 4. Along the belts posters similar to fire prevention posters, calling attention to needs for and advantages of tree plantings, could be placed to advantage. After all, actually seeing the belts with the benefits and purposes explained by a guide or by signs is the best way to inform the public of our Project.

Many townspeople as well as country folk spend their Sunday afternoons during the year driving through our concentration areas. Properly placed and worded signs would go far toward educating the general public.

- Thomas C. Croker, Jr., Tex.

NO! SHELTERBELTS ARE NOT A NEW IDEA

The Science News Letter of May 6 reports that an American expedition exploring in a high plateau in the interior of New Guinea found a tribe with advanced practices in agriculture, including crop rotation, irrigation and drainage, and the use of trees for protection and in shelterbelts to prevent soil erosion.

So you see there is nothing new under the sun -- even in these enlightened days.

- F. E. Cobb, N.Dak.

TWO-MAN TRANSPLANTING CREW MOST EFFICIENT

Because of the variety of crew organizations used at the different nurseries engaged in transplanting operations this spring, a time study was conducted at the Plainview, Texas, nursery to compare the accomplishments of the various units. Without further comment it can be stated that the two-man crew gives best results, the output per man being more than 25 per cent greater than in the other units. Below is a tabulation of the results.

EXPERIMENT AND CHECK OF TIME IN LINING OUT STOCK AT PLAINVIEW NURSERY

No. Men to Table	Total Time of Planting in Minutes	•	No. Boards Used to Tables		Total No. Trees Planted	No. Feet Planted	No. Trees Per Man Min- ute	Times Repeated and Checked
4		1.Planting Bds. 2.Lining Bds. 1.Carry Bds.	4	72 ft.	864	144	18	3
3	16	l.Lining Bds. l.Carry & line l.Planting	3 & 4	72 ft.	864	144	18	3
2	17	l.Lining l.Carry and plant	3	72 ft.	864	144	25	4

All the above tests were made on the same day and the same men were used in each operation. In the two-man crew we used one planter twice and checked his time twice with another planter. In the three-man operation, the man carrying the boards used his spare time helping line the boards. The boards were six feet long and held six trees per foot. The lining was done in a perfect trench; weather and soil conditions were favorable.

- Harold E. Engstrom, R.O.

COE SIGHS, AND THE RABBITS SING

I was surprised at Brennan Davis' fear that a hybrid rabbit that could fly might develop in Nebraska, for that is an old story in North Dakota where the rabbits really do fly and they're not hybrids, either. It just comes natural; they take off for long distances in a single jump, and while in the air they can perform loop-the-loops, barrel rolls, and whatnot.

It is remarkable that the North Dakota rabbits are not better known elsewhere, for besides their flying proclivities, they can also burrow beneath the ground's surface like a mole and can attack a tree submarine fashion, pulling it down to them so that often there is only a little of the top left showing. Each rabbit is also equipped with a laboratory, so that he can take a bite of bait, analyze it and, if it contains poison, spit it out and leave the rest alone.

This spring Sid Burton desired to demonstrate his "jumping shot" on rabbits, which he described thus: "I shoot, and they jump and fall dead." I took him to my favorite hunting grounds, and he shot and the rabbits jumped, all right, and kept on jumping -- long, graceful, space-devouring leaps. Sid learned right there that North Dakota rabbits can carry away large loads of lead, and I feel guilty for not warning him in advance never to use a smaller gun than a 30-30 on them. Why, Ken Taylor swears that the other day when he shot a rabbit, he knocked the heart right out of it, but the scoundrel ran away; Ken declares he found the heart.

We have one hope, however. Jamestown has a "whiskers club," preparing for this fall's celebration, and the rabbits have taken to growing whiskers, too. Obviously, a rabbit with long whiskers can't run, because the whiskers will ensnare his feet so that he'll starve to death before he can get loose. He'll encounter similar difficulties in burrowing, or if he takes to the air his whiskers will get caught in the tree branches and he'll hang.

I don't drink nor take drugs, but I do have nightmares and, darn 'em, the rabbits cause them all.

- Auburn S. Coe, N.Dak.

TEN COMMANDMENTS OF SUCCESSFUL LIVING

- 1. Keep rested; tired people take zest from others as well as themselves.

 It is amazing what a difference going to bed two hours earlier will make.
- 2. Don't be too ambitious. The world is crowded with people who have literal mental scars, the result of wanting to be bigger shots than they can be or than the world needs.
- 3. Don't fret about how little book-learning you have. If you keep mentally active and learn a little something new each day, you are an educated man.
- 4. Don't be too conscientious. If you suffer chronic inflammations of the conscience, careful always to do every little thing just right, the very inertia is likely to make you go wrong.
- 5. Don't fight against human nature. Don't expect other people or yourself to be perfect. Shortcomings here and there should be expected and not allowed to steal zest.
- 6. Have a few troubles and a little pain. Those in human experiences are like the olives in a meal. After the tart, sour things, everything tastes good.
- 7. Be your age. The things which bring zest change as we get older. Some people try at 50 to still get a kick from life by doing what they did at 20. All they get is a pseudo-happiness.
- 8. Don't let others or yourself bluff you into being timid. What we should do is emphasize our few strengths and forget our many weaknesses.
- 9. Get into a job which you like doing. Even if it pays you \$10 a week less, its dividends in zest probably will more than repay you.
- 10. Look to the future rather than the past. There is always going to be an upturn and another crest in your zest.
 - Northern Region News.

WULF TRANSFERRED TO NEW ENGLAND

Fiscal Control has lost one of its most popular members, with the transfer of W. F. Wulf to the New England Forest Emergency Office at Boston, Massachusetts, where he assumes the title of Junior Administrative Officer and takes up his new duties in the fiscal division. The transfer was effective June 16, and Bill and the family headed their gas buggy into the big adventure on the 15th.

Members of the Regional Office and their families said their official goodbyes at a picnic at Pioneer Park, Lincoln, on the evening of May 31, at which the Wulfs were the guests of honor. An excellent picnic dinner was served by a downtown caterer, and everybody enjoyed good food and a good time. Bill was presented with a fountain pen desk set, Lee Stratton making the presentation speech.

It is hard to say goodbye to the Wulfs, and we know that members of the Unit Offices join us in wishing them success and happiness. So it's "adios" Bill and Marie; we'll always be glad to see you when you're back this way.

- Olive Peterson, R.O.

THE INDIANS ARE BAD OUT THERE, TOO

The following bit of informal correspondence between the State Office and one of the field units should prove interesting reading for anyone who has had occasion to delve into the Manuals, Volumes I and II, the Regulations of the U. S. D. A., the R-9 Handbook, and other varied sources of instructions, etc.

Letter from the State Office: "We have in our files letter of authorization for dated April 12 for travel during the approximate period April 12 to 13. Please advise why we have not received an expense account for this travel."

Came the mail and the reply: "This man was sent on what we expected would be a one-day trip. However, to abide by the tenets of the Big Book, his authorization was made to cover two days to provide for unforseen emergencies such as fire, flood, acts of God, or the Four Horsemen of the Apocalypse. The trip was accomplished entirely between 8 A.M. and 6 P.M."

- Texas

(Texas personnel apparently also has "a passion for anonymity," and one of these days this Palladium of Truth and Justice is going to clamp down on those shrinking violets who shun the dazzling light of public acclaim. Or is it something else they seek to shun? - Ed.)

PSFP SAFETY RECORD LEADS

A compilation of accidents in the Forest Service during March shows our record to have been better than that of any other Region in the Service. Our accident frequency rate was 3.81 per million man hours, or .305 per 10,000 man days.

The Chief's office says: "We wish to congratulate you on this excellent showing." Congratulations are due to you fellows who are at the controls! Let's keep our record in the same relative position. We can do it!

A STUDY IN INVESTMENT AND YIELD

With 21,000 catalpa speciosa seedlings, Farmer Towne of Dover, Oklahoma, started a pretty story. He planted the trees in a 22-acre block on the east side, near the north line, of his 110-acre farm which was sandy but with a clay subsoil and a 40-foot water table. Three years later he planted 41,000 catalpa seedlings, extending his plantation westward in a belt 30 rods wide, so that in all 52 acres of perfectly good wheat land had been planted to trees. Towne died a year before the first harvest of trees, but his nephew, Fred Towne, has carried on.

Fred sold the first block on the stump in 1930, when the trees were 14 years old and averaged 35 feet high, for \$1,000 cash. The buyer really mopped up the area, but because of fast sucker growth the new trees are now 30 feet tall and about ready for another harvest. In the meantime, \$500 received for small cuttings has brought the yield from these trees to \$1,500. Fred handled the cutting of the 30-acre block himself, getting 950 tree-post trees, worth 45 cents each, per acre and 225 telephone poles at \$1 each. He cut the trees in 1936, when they were 17 years old, and they brought him \$13,050. In addition, other income from the whole plantation was \$1,500 for 2,000 corner posts and \$45 for 30 ranks of wood, bringing the yield from the two blocks in two decades to \$16,095 or \$15.47 per acre per year.

From the yield of \$16,095 are to be deducted \$343.20 taxes paid, \$150 labor cost of planting (slit method), \$2,500 for maintenance and cutting, and \$1,065 initial cost of planting stock -- total, \$4,058.20 -- which leaves the net income at \$12,036.80 or \$11.57 per acre per year. The land is valued at \$25 an acre, so the annual net earnings were 46.3 percent on the investment and in the 20 years the net return has been over $9\frac{1}{4}$ times the value of the land. Besides the cash income, Fred has secured from the plantation posts for six miles of fence on his farm and for the last nine years his fuel bill has been the cost of hauling wood from the farm to his home in Dover.

The second growth on the 22-acre plot is now nine years old and that on the 30-acre plot, three years old, and both are managed with the expectation of three-post trees in ten years. With his cutting cycle 10 instead of 17 years, Fred expects big things from catalpa. Spurred by his success, numerous other farmers in the county have planted small groves of catalpa, for they now know that it is "good medicine."

- J. E. Longmoor, Okla.

Translation of some of the Indian names is not particularly complimentary. Chicago means "Place of the Skunk," Winnebago is "Filthy Water," Brule means "Burned Thighs," Chippewa "To Roast Until Puckered Up," and Iowa, "Sleepy ones." Milwaukee means "Fine Land."

- Wisconsin Conservation Bulletin.

A truck driver, transporting a shipment from Detroit to California, sent the following telegram from Blair, Nebraska, to his home office.

"Saw shadow STOP Hit shadow STOP Wasnt shadow STOP Was milk truck STOP Wire fifty dollars STOP"

- Region 9 "Daily Contact"

FROM THE EDITOR'S NOTEBOOK

Sid Burton, the Project's principal persifleur, has hit a new high in wildlife (one word) yarns. He reports that about mid-May he found a spoonbill duck hen on a nest in a 1936 shelterbelt a little north of Jamestown, North Dakota, "40,000 miles from water." There were nine eggs in the nest, so Sid's now worrying about how the little ducklings will learn to swim. He doesn't mind shooting at pheasants and so forth on dry land, but he'd hate to see a dry land breed of ducks develop--somehow it might cramp his style.

Kansas has a little story about a truck, which is reported by W. J. Baxter of the State Office. Many stories about trucks filter in to the Division of Operation, it is true, but this one from Kansas is not a headache. It all came to light when Baxter inspected a 1935 Chevrolet pickup at Dodge City on May 7 and found that after having been driven 100,000 miles it still looked and performed like a new car. Gaylord Hargadine is given a resounding slap on the back in Baxter's report, because he is the district officer responsible for the vehicle. The Chevrolet has had one overhauling -- last year -- which included a rebore job and repainting. After the repainting, Hargadine was liberal with wax and elbow grease so that now the truck looks as though it just came from the display room. The motor likewise is kept clean and bright, Baxter says. In fact, Baxter asserts, inspecting equipment like that makes being an inspector a pleasant occupation. And Hargadine? -- Well, it is said that last fall he declined to turn the Chevrolet in for a new truck, because he liked the old one best.

A most unusual demonstration tour was conducted by Edwin C. Wilbur, district officer at Elk City, Oklahoma, May 25. For six hours he was host to the 33 members of the Senior class in forestry from North Carolina State College at Raleigh. The students were accompanied by Professor J. V. Hoffman, head of the School of Forestry, and Professor L. Wyman, and were homeward bound from a long trip which had extended to the Pacific Coast. The faculty members and students were shown shelterbelts of all ages, from 1935 to 1939, and had a chance to study survival, composition and rate of growth. The tour was restricted to Washita County, where the concentration of plantings gives a comprehensive picture of the progress of the Project. Professor Hoffman is reported to have expressed pleasure over the shelterbelt program, and requested cross-section samples of trees and pictures.

Helen Frisch, stenographer at the Hutchinson, Kansas, office of this Project, got her picture in the papers in a big way. We saw it in the Omaha (Nebr.) World-Herald June 11, and since it was an "Acme" photo, it has gone to all of the big newspapers of the country. Helen, as the Kansas Office well knows, is an accomplished pianist; in March she was first-place winner in the Kansas state contest, and late in April she gathered in second honors in the tri-state contest which pitted winners from Missouri, Kansas and Arkansas against each other. The reason for

Helen's present fame hinges on the fact that once a month she makes a 1,500-mile journey to Chicago and return in order to take a one-hour plano lesson. We believe that Helen has what it takes, and that it's only a matter of time until no novelty item will be needed to gain such publicity for her.

Very keen interest in the Prairie States Forestry Project was shown by R. W. Blackburn, national secretary of the American Farm Bureau Federation, and H. B. Test, president, and A. W. Palm, secretary of the South Dakota Farm Bureau, on a recent trip through Beadle County with Farl J. Pierce, district officer. Pierce reports that the visitors spent a full half-day visiting shelterbelts, and that they were favorably impressed with the accomplishments.

Lee Stratton, our Chief of Fiscal Control, has returned from a 10-day sojourn with his family at Ogden, Utah. He made the trip "home" especially to do the honors at the wedding of his eldest daughter, Margaret, and in common with the other friends of the family we wish Lee's girl and her husband all the happiness and success in the world. Since his return, Lee has been exhibiting two golf score cards, to prove to the Regional Office experts that he really is good.

Milton Olson, senior clerk from the Oklahoma State Office, returned to Oklahoma City June 6 after a two-month sojourn in the Regional Office Purchasing Unit. Mrs. Olson came with him in the family chariot, but she returned alone via railway accommodations. She was convalescing after a major operation, and it was not deemed advisable for her to make the journey home by automobile.

SAND AN AID TO NURSERY SOWING

Sand, which tests with litmus paper show to be neutral to both acid and alkali, proved beneficial in nursery sowing at Purcell, Oklahoma, this spring. Light colored and fine textured, it mixes well with desert willow and other seed needing a mixture for sowing, and it was used to advantage to prevent blowing of Chinese and American elm seed during planting.

Since the sand is of a different color than our soil, it is more readily seen than some of the smaller germinating seed and makes easier the job of raking ridges down to the proper level. There also is a possibility that it offers some protection against damping-off and other losses of the sort. A mixture of the sand and peat moss to cover conifer seed created a mellow surface that will not crust or pack, while good results were obtained with the sand alone.

The sand is taken from more than a foot below the surface and, therefore, is free from weed and grass seed.

- E. W. Luke, Okla.

A SHOWBOAT TRIP

Until my recent trip to Kansas and Nebraska to assist H. N. Wheeler, Forest Service lecturer, my mental picture of those States was fairly well described by the old ballad about the "lone prairie," that term heretofore implying a barren, treeless plain. Consequently, I was agreeably surprised as I traveled through those States (usually at 60 miles per) to see many small areas of trees, ranging from 6 inches to 70 feet in height, which were attractive and in many instances beautiful.

Those small cases of trees, as they might well be called, although the surrounding area usually is covered with growing crops of wheat, offer a challenge to the pessimists who say that trees will not grow on the prairies, for most of the trees are plantings dating back from 1939 to the early settlement of the States.

As Wheeler and I wheeled along the highways, we frequently were pleased with new plantings which kept bobbing up along the road, whether a Clarke-McNary plot of the Extension Service, 3 rows wide and 300 yards long, or a Prairie States Forestry windbreak, 7 to 10 rows wide and one mile in length; each was an added joy in a generally pleasant and interesting trip.

Lloyd F. Smith and Clayton W. Watkins, Extension Foresters, respectively of Kansas and Nebraska, accompanied us. Also, we contacted several officers of the PSFP. Through these men I secured a fair cross section of the prairie planting problem.

The Extension Service had arranged our itinerary through the County Agents, and the audiences were enthusiastic, if sometimes small. We had 10 day and 25 night stands, and contacted about 2,000 people in each State. Usually Wheeler gave his illustrated lecture while I ran the slides and the sound films. However, I filled several engagements on the speaking schedule.

We traveled about 3,700 miles and, as we seldom got to bed before midnight, Wheeler can well be thankful that he didn't get wrapped around an oil derrick or planted in a blowhole. Luckily, I was able to keep at least one eye open until I reached Denver, when I slept 16 hours in a row.

W. G. Baxter, once a supervisor of the old Sopris National Forest and the man who induced me to enter the Service, joined us for a day in Kansas. He is now assistant State Director of the PSFP, with headquarters at Manhattan, and is enthusiastic about their plantings. We revived old times as we inspected some of his plantings on the way to an evening meeting. He sent regards to all old time associates.

The high light of the trip was a visit to the Nebraska National Forest. Supervisor Dayharsh took us on a circle trip over a large part of the Bessey Division. The plantings are extremely interesting, while the buildings, the nursery development, the trees around the headquarters were equally enjoyable.

As a whole, it was a fine trip, regardless of the grind and tedium, which is the natural result of such work.

- L. C. Shoemaker - R-2 Bulletin.

DON'T OVERLOOK THE WOMEN

Writing in connection with Miss Margaret March-Mount's recent trip in Nebraska to attend district conventions of the Federation of Women's Clubs, Scott Leavitt, Chief of the Division of I & E in Region 9, says:

"We were very glad indeed to loan Miss March-Mount to you for the two weeks' period. We have found the support of the organized women in this region of the utmost value to us in advancing our acquisition program and the entire cause. We now have between 35 and 40 cooperative memorial forests. Participation in the planting of these forests crystallizes the interest of the women's organizations, and we feel the value in every field of our endeavor. The latest example is the request from the Daughters of the American Revolution in Illinois to plant 1000 acres on the Shawnee. The Federated Women's Clubs of that state are just finishing up a project of 1200 acres. In Missouri the American Legion Auxiliary is sponsoring a state-wide school children's forest, and also a memorial plantation of their own. These activities are now reaching into all of the states of this region, and we attribute it very largely to our women's work. I have an idea that this activity has paid for itself financially as well as otherwise, although we have not approached it from that angle. The response to Miss March-Mount's work in Nebraska is sufficient proof that there is a real opportunity in that direction."

- E. L. Perry, R.O.

WINTER-KILL OF TREES SHOWN BY SURVEY

A one-percent survey of 1938 shelterbelt plantings to determine the loss from winter-kill and rabbit damage was made this spring, the survey starting early in the year in Texas and moving northward as weather permitted. The shelterbelts chosen were from those included in the five-percent survival survey made last fall, which had shown the greatest survival during the growing season.

Winter-kill was very light in Texas, Oklahoma and Kansas, except that where borers had been active among the cottonwoods, the loss was quite marked because of the reduced vitality of the trees. Inasmuch as the survey covered only one percent of the shelterbelts planted in 1938, and those were selected from the plantings surveyed last fall, many localities where rabbit infestation was severe were not included. I believe that if the shelterbelts in those areas were included, the loss would exceed the figures obtained.

The northern States had a larger amount of winter-kill, mulberry and Russian olive being hardest hit, while green ash appeared to withstand the winter best. It is interesting to note that where shelterbelts showed evidence of good care and growth, the amount of winter-kill was much less than where the trees had not grown much.

Most noticeable, and probably the most serious damage was to the pines and cedar in Nebraska and South Dakota. To determine the exact causes of this will call for a detailed investigation of the shelterbelts in which the trees died. One obvious solution, however, would be to make sure the trees were well protected by cover crops when they go into the winter.

- Conrad Borsting, R.O.

FROM DOUBT TO SUPPORT IN A SINGLE YEAR

K. W. Taylor forwards a copy of the following letter which the North Dakota State Office received from a county agent in the eastern part of the State:

"I have just read your first issue of Shelterbelt Notes which I received this morning. I note in the next to the last paragraph that the continuance of the program for next year has not as yet been assured.

"I wish to state in this connection that I have received much favorable comment on this Prairie States Forestry Project and that it would not require much effort at all to get a great many farmers and others to make known their desire to have the work continued.

"Many good practical sound thinking farmers have stated that they thought that this tree planting work was the best thing the Government has done for the stabilizing of agriculture in this area. They would like to see the work continued on a large scale and I am very certain that they will make known their desire in that connection if there is any question about the continuance of the work."

This story would not be remarkable except for Taylor's comment to the effect that when he first contacted this county agent in preparation for negotiations work in the county last year, he found him possessed of a definite conviction that the program represented a waste of money and was of no value to the country. His complete conversion is a tribute to both the selling power of the living shelterbelts and to the type of open-mindedness that is required of a good county agent.

PERSONNEL MATTERS

- W. F. Wulf, who has been in Fiscal Control for the past four years, has accepted a position as Junior Administrative Officer with the New England Forest Emergency Project in Boston. Bill left on June 16 for his new assignment.
- Eanff O. Young of the Oklahoma City office will transfer to Lincoln to fill the vacancy caused by Mr. Wulf's transfer.
- W. G. Baxter of the Manhattan, Kansas, office is on detail in the Division of Operation and is engaged in revision of the sign and equipment handbooks.

John Works, Earl Cook, and Leland Fitzgerald have been appointed as Field Assistants, and with Conrad Borsting, are working with Warren Barnes on the crop influences survey.

Student Assistants Martin Applequist and Warren Noland have reported to the Fremont Nurseries and the Neligh District in Nebraska, respectively.

Laurel S. Waller has been appointed as temporary assistant to the Automotive Mechanic at Elk City, Oklahoma.

Ivan C. Waldo, clerk in the District Office at Alliance, Nebraska, left on May 31 to accept employment in the Post Office Department.